R E P O R T R E S U M E S

ED 015 762 LI 000 033

MECHANIZED CIRCULATION SYSTEM, LEHIGH UNIVERSITY LIBRARY.
LIBRARY SYSTEMS ANALYSIS, REPORT NUMBER 4.
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PUB DATE 11 NOV 66

EDRS PRICE MF-$0.25 HC-$1.56 37P.

DESCRIPTORS- *AUTOMATION, *COLLEGE LIBRARIES, LIBRARY EQUIPMENT, DATA PROCESSING, COMPUTERS, *LIBRARY CIRCULATION, SYSTEMS ANALYSIS, GE 225 COMPUTER, IBM 357 DATA COLLECTOR,

A MECHANIZED CIRCULATION SYSTEM CURRENTLY IN OPERATION AT LEHIGH UNIVERSITY HAS PROVEN TO GIVE RELIABLE CONTROL OF CIRCULATION ALTHOUGH IT HAS NOT SAVED ON OPERATING COSTS. WHEN THE STUDY WAS UNDERTAKEN TO DETERMINE THE FEASIBILITY OF CHANGING FROM THE PREVIOUS MANUAL SYSTEM TO THE CURRENT ONE, THE LIBRARY WAS SERVING A STUDENT BODY OF 4500 STUDENTS AS WELL AS 3000 NON-UNIVERSITY PATRONS AND 275 FULL TIME FACULTY MEMBERS. THE CIRCULATION AT THAT TIME WAS ABOUT 151,000 ITEMS A YEAR AND WAS CREATING PROBLEMS OF CONTROL AND CURRENCY OF INFORMATION. WITH THE NEW SYSTEM, LOANS ARE RECORDED FROM KEYPUNCHED BOOK CARDS AND BORROWERS' IDENTIFICATION BADGES BY MEANS OF AN IBM 357 DATA COLLECTOR TO PRODUCE TRANSACTION RECORDS. DAILY THESE RECORDS ARE USED TO UPDATE IN A GE 225 COMPUTER THE TAPE CIRCULATION RECORD AND TO PRODUCE A NEW PRINTED CIRCULATION RECORD AND A STATISTICAL ANALYSIS OF THE LOAN. OTHER PROCEDURES IN THE SYSTEM PROVIDE FOR AUTOMATIC HANDLING OF OVERDUE AND FINE NOTICES AND FOR MAKING RECALLS FOR BOOKS WANTED BY OTHER PERSONS. BESIDES THE SPECIFIC COST DATA GIVEN THROUGHOUT THE REPORT, EXAMPLES OF AND INFORMATION ABOUT THE SEVERAL PRINTOUTS ARE GIVEN IN THE APPENDICES. (CM)

ED015762

CENTER FOR THE INFORMATION SCIENCES
LEHIGH UNIVERSITY BETHLEHEM, PENNSYLVANIA

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Anne Flannery
and
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November 11, 1966

CENTER FOR THE INFORMATION SCIENCES

Lehigh University

Bethlehem, Pa.

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Mechanized Circulation System

Lehigh University Library

Anne Flannery, Associate Librarian

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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MECHANIZED CIRCULATION SYSTEM
LEHIGH UNIVERSITY LIBRARY

Anne Flannery, Associate Librarian
and
James D. Mack, Librarian

Summary:

Under pressure for regaining control of a rapidly growing circulation, a mechanized circulation system has been put into successful operation at Lehigh University. Loans are recorded from keypunched book cards and borrowers' identification badges by means of an IBM 357 data collector to produce a transaction card file. Daily transfer of this card file to magnetic tape produces an updated printout as well as a current statistical analysis. The mechanized system has not saved operating costs, but full and reliable control of circulation has been achieved.

Background.

At present Lehigh University, located in Bethlehem, Pa., serves a student body of 3,000 undergraduates and 1,500 graduate students. The full-time Faculty numbers 275. The Library collections contain 450,000 volumes.

Owing to a threefold growth of circulation since 1953, from 50,000 to 151,000 items, the Readers' Service Division of the Lehigh University Library had gradually lost control of its book collection. By 1963 the librarians had given up sending overdue notices, relying only on a recall regulation under which any book that had been out for one week could be called in for use of another borrower upon request. Records of borrowers, both students and faculty, terminating their connection with the University, could not be properly cleared; and there was no way to refuse service to borrowers who abused their privileges. Moreover, students and faculty had begun to object to "personal" libraries collected from the library stacks, and thus about

the number of unavailable books. Study of possible solutions indicated mechanization of circulation record-keeping.

Full cooperation of the library staff was secured, and a study of the local situation begun. First, the Librarian drew up a statement of the mission and requirements of the total library system and its three principal sub-systems - Acquisitions, Cataloging and Circulation. In moving towards general mechanization, logic suggested that acquisitions should be the first area for concentration, followed by cataloging and circulation in that order. However, necessity dictated otherwise. The quantity of book purchases did not justify immediate change, and no backlog in cataloging existed. It was, therefore, decided to start with circulation, and to postpone mechanization of other sub-systems.

The Mission set by the Librarian for Circulation was, and remains, "to facilitate use of the collection by the most liberal regulations compatible with property control". Since Circulation must account not only for physical objects, but also for the human factor, and since library property is lent with the expectation of eventual return, the requirement of this sub-system is to furnish quick and accurate answers to the following questions:

1. What books (periodical issues, etc.) are in use?
2. Of the books in use, when may a given book be expected to return?
3. Who has a given book?
4. What books does a given person have?

Answers should also be available to certain ancillary questions, including:

1. What books have been requested by another borrower? Which borrower?
2. What books cannot be accounted for?
3. What books are on Reserve?

4. What items are at the bindery?

5. What books should be replaced?

6. Identification of non-University borrowers.

7. What persons have delinquency charges standing against them?

8. What students, faculty or staff will presently leave the University permanently?

Essentially this is a highly complex inventory control problem.

In 1963 and 1964 visits were made to Brooklyn College, Southern Illinois University, the University of Missouri, and Florida Atlantic University for the purpose of studying their systems. Concurrent with these visits, the Assistant Librarian in charge of Readers' Service, detailed the requirements of a circulation control system and prepared a flow-chart for the basic control procedure. These steps were examined by staff of the University's Computer Laboratory. At this point the plan envisaged keeping visible circulation records on keypunched cards at the Loan Desk, and the use of a sorter. But Dr. Heiliger, at Florida Atlantic University, advised strongly that the visible keypunched cards were not necessary, and that in retaining them we were in fact losing one of the principal advantages of automation. The plan was therefore revised so that cards generated by an IBM Data Collection System with its keypunch would be fed into a computer, and only a daily updated printout of circulation would be kept at the Loan Desk.

The 1965-66 Library budget provided funds for the changeover.

General Plan.

Basically, the plan of mechanization is the substitution of a keypunched card for conventional (goose-quill) book card, and of a keypunched badge for the student ID card. These two are inserted simultaneously into an input

station (IBM 357 data collector) to generate, by means of an automatic IBM 026 keypunch, a third card which combines the information from the keypunched book card and the borrower's ID card. At midnight, when the Library closes, these transaction records are taken to the Computer Laboratory for updating on the University computer a tape circulation record, and production of a printout available at the opening of the Library the following morning.

Equipment.

The computer component is a GE 225. Estimating on a basis of approximately 165 hours at $65 per hour, $10,750 was allocated to the Library for computer time in 1965-66. (The charge for computer time has since been reduced to $50 per hour.) The estimated computer time required, 45 minutes per day, has thus far proven correct.

The following equipment has been installed on a rental basis:

	Monthly rental*
1 - IBM 013 badge punch (for use on ID cards)	$ 20.00
3 - IBM 357, Model 6 input stations	141.00
1 - IBM 358 input control (required with 357; allows input from as many as 20 stations)	79.00
3 - IBM 2287 controlled reset (an additional feature on the 357 to allow badge to be retained while any number of transactions are recorded)	6.00
2 - IBM badge read-out (an additional feature on the 357 to allow a badge recording to enter the system independently of any input card)	10.00
2 - IBM 026 alphameric card punch	120.00
2 - IBM 6100 receive control (an additional feature on the 026 to enable it to receive information from 357)	54.00
1 - IBM 373 punch switch (if 026 fails, this automatically switches input to other 026)	27.00
Total monthly rental	$ 457.00

*Prices do not include educational discounts.

With the building of a new and separate Science and Engineering Library (scheduled for completion in 1968) the above equipment, will be duplicated. It would be possible to duplicate only the input equipment and to connect by cable with the 358 and the 026 in the Main Library; but because an information science laboratory will also be located in the new library, this equipment is to be used also for research. Instead, daily circulation from the two buildings will be merged on the computer tape.

The main reading area of the present library on the first floor is contiguous with and open to the circulation area. In order to reduce noise level, only the 357 input stations have been installed at the circulation desk, and a third 357 input station, the 013 badge punch, the 026 keypunches and the 358 and 373 in the Sorting Room on an upper floor, with a cable connection between these two areas. (The purchase and installation of this cable is not a service provided by IBM.)

The third IBM 357 was added after the other equipment had been installed. Originally it had been supposed that the ID cards could be punched at the circulation desk and immediately tested in the 357, but the noise of the badge punch, and the impracticality of getting results by intercom precluded this. Therefore, one of the first two 357s was moved to the Sorting Room.

The same 357 may be used for charging and discharging books. A special badge with the number 9000000000 is used in discharging. However, for convenience of access and for better flow of traffic two 357s are located at the circulation desk. Normally one of the input stations is reserved for charging books, and the other for discharging, the discharge unit serving also as a standby.

The 357s, each weighing about 70 pounds, are hung on a wall-type panel, and may easily be moved to other locations if proper cable connections to the 358 are provided. We have had the impression, however, that the moving tends to upset the mechanism of the 357.

We had been informed that the equipment trouble most often expected would be failure caused by jamming of cards in the 026 keypunch. (The jamming is usually the result of warped cards, a condition which may be prevented by storing cards in a compressible file case.) A red light and a strident buzzer on the keypunch and a red "repeat light" on the 357 at the Loan Desk immediately indicate this trouble. However, since the repeat light on the 357 also indicates other types of trouble, and since there is not always someone in the Sorting Room, a three-station intercom has been installed between the circulation desk, the Sorting Room, and the desk of the Associate Librarian. (The use of an intercom was an improvization. It would be helpful if the keypunch - 357 equipment could have a built-in signalling system indicating specific malfunctions.)

Computer Input.

A. *ID Cards.*

In the past, faculty, staff and students have carried an ID card designed principally for admission to athletic events. With the introduction of EDP into the library operation, a new ID card was designed. It contains an insert, stating the uses and privileges for which the card is intended, and on which the owner's photograph is mounted. These cards are then laminated in Duraflex plastic.

The ID badge for Faculty is permanent; the Staff card is valid for five years.

For the first year of operation, the Student ID card was used also for admission to athletic events. This required that the cards be handpunched for each event, a procedure that too often interfered with the IBM requirements. This combination badge has now been abandoned. Beginning in 1966-67, therefore, student ID cards will be issued for a period of five years and will not be handpunched for any purpose. Space on the front provides

for validation each semester by use of a "hot stamp." The entire back is divided into numbered squares to register, also with a hot stamp, voting in authorized student elections and other authorized student activities. The Athletic Department will issue a paper ticket annually for its own purposes.

The library also serves about 3,000 non-University persons, of all ages, from the community. These readers may borrow books, and they, along with the summer-school students, are issued courtesy cards, numbered serially, which expire in September of each year.

All badges are punched with a ten-digit number, the first number indicating type of borrower, and in the case of faculty, staff and students, the other nine are the borrower's Social Security number. The Social Security number was chosen because it is both unique and permanent. These numbers are obtained from students by direct mailing each summer to the incoming class. It may be noted that about 99 percent of all students have Social Security accounts. Foreign students and summer school students are assigned type-of-borrower number and a serial number as for off-campus borrowers. One type-of-borrower number was reserved for internal use, registering discharges, recalled books, missing books being searched, and charges to reserve shelf, bindery, mending room, catalog department, and interlibrary loan.

Prices were secured on having the laminated ID cards processed by an outside agency. But this would have occasioned delay, and in order to continue the University's policy of issuing ID cards to students immediately upon registration, it was decided to purchase laminating equipment. An inexperienced team of three young people were able to laminate 800 cards per day. Direct expenses in connection with ID card production have been as follows:

Equipment:

1 three-station air cooled laminator	$ 665.00
1 automatic clock	61.00
1 Harco-matic die cutter	175.00
2 dies for Cutter (to IBM specifications)	164.00
16 (2 sets) matte plates	77.40
16 (2 sets) planishing plates	27.80
4 packages of cushion stock	4.80
	$1,175.00

Supplies:

20,000 flexible plastic sheets (Duraflex clear 4-1/4" x 6") - two sheets cover both sides of two ID cards	$ 712.00
6,200 ID card inserts (cost of plates included)	385.00
Total	$2,272.00

Production of all ID badges is done in the Office of Public Information, where ID cards have previously been issued. The first year, owing to late installation of the cable from the 357 to the 026, and thus the impossibility of testing cards before they were needed for athletic events, all cards were issued without keypunching, and students were requested to have this done at the library on one of their visits in the first part of the school year. In spite of wide publicity, students, being all too human, procrastinated, and there was somewhat of a rush at the final deadline. Also, many of the cards, having been carried around in hip wallets, had to be 'pressed" to insure accurate punching. In the future all ID cards will be sent to the Library for keypunching, testing, which is an absolute requirement before allowing a borrower to have a keypunched card, and making keypunched address cards.

B. Book cards.

At the beginning, the book card was designed for a single building. But since a new Science and Engineering Library is projected, a card different in design and color is now being used for books that will be transferred to the new building.

Cards with plastic coated edges, rounded corners, of master stock, and with upper right cut were used for this purpose, since IBM advised that these would wear best and would not slip in the 357. Creased cards are used for short books, books with a side-opening pocket, and books with pockets pasted so far up that the keypunched book card would stick out the top. (In 1963, with keypunched cards in mind, pockets were moved near the bottom of the end paper.)

The cost of four plates (two are necessary for each card to achieve clear printing) was $90.00, the set-up charges $70.00, and the 400,000 printed book cards, $600.00. For transaction cards the less expensive general purpose card is used.

Six columns of the book card are reserved for instruction codes to the 357. As the card is being keypunched by the operator, these instruction codes are automatically punched through the program on the drum card. Column 1 initiates the transaction, but is also used to indicate type of loan. Column 62 instructs the 357 to skip, column 77 to stop skip, column 78 to read out the station number, column 79 to make a column check, and column 80 to make a column check and transfer reading to the badge.

Of the collection of 450,000 volumes, it was felt that at least forty thousand cards, representing the most active items in the collection, should be keypunched before the new system was inaugurated. First priority in keypunching was given new books. This is now the last step in cataloging, and is done in the Sorting Room, obviating the need for an extra move. Books returned were given next priority in keypunching. The shelver also selected certain titles known for heavy use. In this way, that part of the collection circulated most often was finished by the time the system was put in use.

Books without keypunched book cards are charged through the use of "dummy" book cards. These are sequence cards which were made up on an IBM 403 accounting machine. They are held at the circulation desk. When a book without a keypunched card is charged out, one of these is inserted with the user badge in the 357. The transaction cards from these charges are placed along with normal transaction cards on the master tape circulation record, the dummy-card numbers so chosen that they are the lowest possible call numbers and hence first in the master file. These charges do not, however, appear on the print-out since, without call number and author's name, they would be meaningless.

After recording in the Data 357 the dummy book card is then attached to the old typewritten book card, and from these two a keypunched book card and a duplicate - which is called the corrected book card - are made. The master book card is held at the circulation desk pending return of the book. Books charged out are hand-stamped with date of charge. In order to recognize that the master book card is to be inserted on return of a book, black ink is used for regular charges, and green for dummy charges. The dummy book card along with its corrected book card is placed in front of the daily transaction cards. A first-sort program orders the dummy cards by sequence numbers (each dummy book card immediately followed by the corrected book card), then combines each set into one record, consisting of the unique sequence number on the book card, the corrected call number, and author information from the corrected book card; and finally sorts the group by the unique sequence number. A dummy merge program then produces normal transaction records, which are in turn merged with the daily transaction records.

C. Transaction Card.

This card combines the information on the book card and the ID card. On the transaction card the type of loan, call number, and author are recorded in columns 1-61, station number in columns 62-64, column checks in columns 65, 76 and 81, borrower's number in columns 66-75. Columns 77-80

are blank for possible use with a time clock, if and when class reserve books are eventually worked into the system.

These cards constitute the data input.

Output.

Programming has been done with the assistance of an electrical engineer on the University staff, and a graduate student formerly in the Center for the Information Sciences. It is important to emphasize that after such a system is in operation, several months of testing and debugging are essential before successful results are assured. In fact, as improvements or shortcuts are conceived the program is continuously revised. It is, incidentally, highly desirable to update the flow chart as these changes are made.

The machine language, GAP, has been used because it requires the least time on the GE 225 computer. An experimental rewrite of part of the program into FORTRAN has been tested successfully on an IBM 1401 computer.

The main program records and updates a daily circulation record. One of the by-products is a daily circulation statistic sheet showing (1) charges by type of borrower: faculty, graduate, undergraduate, staff, other college students, high school students, interlibrary loan, and a miscellaneous group covering other types; (2) charges by class; (3) total charges, discharges, recalled books, recalled books returned, interlibrary loan books returned, total books in circulation; (4) books missing, charges and discharges to reserve, and bindery, and mending. Except for total books in circulation, all statistics are produced for the day, cumulative for the month, and cumulative for the year.

Another by-product is that clearance of an individual leaving the university at an unusual time can be made easily, since the program permits listing of books charged to him at the same time the tape record is updated.

Programming is such that overdue notices are automatically written the first day a book is overdue. It is now planned to change this to a reminder the day before a book is due. The length of time regulating an overdue item is determined by the type of item (keypunched on the book card) and the status of the borrower as punched on his ID card. Periodicals are loaned for one week only to everyone. Books are loaned for four weeks to undergraduates, graduate students, and staff, except that all books for students are due on the last day of examinations at the end of each semester. Books charged to faculty between May 1st of one year to May 1st of the next year are due on June 1st of that year, the one month lag being for the benefit both of the faculty and the library staff. Because of the students' just complaints that too many books have been out of the library and thus unavailable, off-campus borrowers are now limited to a one-week borrowing period.

If a book charged to anyone not a faculty member is not returned, after one week in the case of periodicals and recalled books, and after two weeks in the case of other books, the following notice is automatically sent: "The material cited has not been returned. A service charge of $5.00 for each item cited has been added to the accumulated fine. If the volume is not returned, a replacement charge and an additional charge of $5.00 to cover the cost of cataloging will also be assessed for each item cited. Please notify the University Library if the material has been lost." At this point fines no longer cumulate because it seems unrealistic to allow fines on students to continue to mount ad infinitum, and because, since all notices go out from the Bursar's office and all monies are handled by that office, continuing cumulation would require far too much communication between that office and the library.

If a book is returned after the date due, a notice is sent to that effect, and the fine indicated. If a book on which a service charge and fine

have been paid is returned, a notice is sent to the borrower that any replacement and cataloging charges assessed will be cancelled, or if already paid, refunded. If a book is recharged by a borrower without discharging it first, the book retains its original due date. If the book is charged out by a new borrower, the record is changed to the new borrower with a new due date; if at this time the book was overdue, the former borrower automatically receives a fine notice.

All books are subject to recall when requested by another borrower, or for class reserve. On receipt of such a request an exact duplicate book card is keypunched from the circulation print-out. This book card and an ID card with a number reserved for recalls are inserted in the Data 357. On the next print-out these titles appear preceded by an "R", and the holder of the book is automatically sent a notice that the volume is needed by another borrower or for reserve, now has a new due date - 7 days from the date of the notice, and should be returned with the notice. If an individual returns a recalled book without the notice in it, he could renew it without the Circulation department knowing it. Here a telephone call or a letter is the only solution. If the book was returned the day previous to the recall, or if the recall was put in twice by mistake, or if the book card was not keypunched in exactly the same form as the record on the print-out, the title appears at the end of the print-out under a list of "Bad Recalls", and appropriate action is taken.

A list of "Recalled Books Returned" appears at the end of the print-out each day. This is given to the shelver immediately in the morning, and most of the books are found in the Sorting Room. Occasionally they have to be sought in the stacks. Only a very few have gone to the stacks and been charged out before they could be retrieved.

Thus far, the putting of two recalls in the system for the same book has not been worked out. Second recalls are held until the book is returned, which means that the list of "Recalls Returned" must be checked against a manual file. This, of course, is the weakest part of a system not "on line", but recalls have always been an integral part of our circulation policy and so could not be omitted.

Overdue and other notices are automatically printed by the computer in a UARCO Data-Mailer form, ready for mailing and separated into two groups - those to be sent through campus mail, and those through the U.S. Post Office. If the number to be sent out through the Post Office is 300 or more, the Data-Mailer may be printed with a postal permit, obviating stamping. The Data-Mailer is a simple but ingenious device by which a top copy goes to the Bursar's Office, and the second copy is a sealed envelope with inside carbon paper at points necessary for duplication of information needed from the Bursar's copy. A mechanical de-leaver and burster (price $1,000.00) is used to separate copies. (Separation could be by hand, but in order to get the notices out immediately it was thought preferable to purchase this mechanical equipment.)

The primary storage medium of the necessary address file is magnetic tape. Programs have been written to update this file as well as to provide ordered listings as required. For each borrower the following information, where available, has been keypunched on one or more cards and recorded on tape:

1. The borrower's number, either Social Security or a serial number.
2. The borrower's name.
3. The borrower's local (University) address.
4. The borrower's home address.

5. The borrower's ID card number - a serial number printed on ID card and requested by the Book Store for purpose of cashing checks.

6. The borrower's graduating class designation.

The program which updates the address file allows any of the last five items to be inserted, changed, or deleted by punching a new card containing the borrower number and that part of the information to be affected. Since the file is ordered by borrower number, a card with the borrower number only causes the program to delete the entire record.

Columns 1-10 give the borrower number, which must have ten digits.

Columns 11, 12 and 13, the graduating class of the borrower. Column 11 must have the initial letter J, F, or O, indicating month of graduation. Columns 12 and 13 must have two digits for the year. If this information is not provided, the three columns must be blank. If this information is to be deleted, the three columns involved will contain three asterisks.

Columns 14, 15, 16 and 17, the serial number of the borrower's ID card. This must be all numeric; if not given, the four columns must be blank, or if this information is to be deleted, the columns must contain four asterisks.

The remainder of the first card, and columns 12 through 79 of any required additional cards contain information in a free-form format. If it is necessary to continue information from one card to another, column 80 of the first and column 11 of the continuation card will contain a virgule (/). Column 79 of the first card is considered to be adjacent to column 12 of the continuation card. Any of three items of information may be given.

The borrower's name always begins in column 18 of the first card. The name is punched in inverted order, that is, surname, comma, faculty title, forenames or initials as furnished. Names of corporate borrowers are given in normal order without comma. The borrower's name need not be given if other information already in the file is being updated.

The University address and home address may occur in either order. Addresses are given line-by-line exactly as they are to be printed, with the lines separated by asterisks. No line of name or address may exceed 33 characters, and no address may have more than five lines. U.S. mail addresses include the complete address with the ZIP CODE.

Home address are all U.S. mail and preceded by the code symbol =. Since many students live off-campus, University campus addresses are preceded by the code + and University off-campus addresses by the code $. This automatically separates the Data-Mailers into those for campus delivery and those for the U.S. mail. If it is desired to delete an address, the corresponding symbol (=, + or $) may be punched with no address given.

Costs.

As indicated above, planning for mechanization began in 1963. The system went into full operation on February 22, 1966. Direct costs over these years, and to June 30, 1966 were as follows:

Equipment Rental	$ 3,992.54
Computer Time	2,660.66
Supplies and Equipment	3,916.99
Postage	361.18
Travel	442.87
Building alterations	630.82
Sub-total	$12,005.06
Salaries and Wages*	6,110.10
TOTAL	$18,115.16

*Does not include either the salary of the professional library staff, or the contributed time of the chief programmer.

Expenses allocable to the single year, 1 July 1965 - 30 June 1966 were $9,586.73. This must, however, be read with caution since computer time for only slightly more than four months is included.

As noted above, the budget for 1966-67, excluding Salaries and Wages, is:

Supplies and Equipment Rental	$ 4,000
Computer Time (at $50/hr.)	13,500
	$ 17,500

Conclusion.

In general it may be said that, although there is widespread interest in mechanization, there is no reason to mechanize a circulation system if conventional procedures provide adequate control. There would also appear to be no arithmetical formula derived merely from current circulation volume which will tell whether to consider mechanization. The principal functions are growth-trends and the level of control desired. Obviously, mechanization should not be adopted as a status symbol.

It is absolutely essential to understand that the principal problems in mechanization arise neither from technical (think) errors nor from equipment failure. They are there, to be sure, and can be embarrassing. A variety of human obstacles - budgeting, staffing, coordination of service requirements, and the frustration of plain human error - frequently intervene to cause delays in what is at best an intricate system.

Murphy's Law still holds.

Appendix 1

Circulation File

(Sample Sheet for November 10, 1966)

Items are ordered by call number. Column 1 indicates borrower number or any charges made to reserve, bindery, mending, interlibrary loan, etc. Column 2 gives date due. The symbols P, R and B preceding the call number indicate respectively: periodical charge; item recalled for class reserve or for another borrower; item lost or not returned for which borrower has been billed. The call number is followed by as much of the author entry as space permits in a two-column print-out. Fuller information, including title, is keypunched on the book card and could be used in any on-line system.

I.D. NO.	DUE-DATE	CALL NUMBER
0123260629	9JE67	510.6A51T,56V81 AMERICAN MATHEMATI
0123260629	9JE67	510.6A51T,58V87-88 AM MATHEMATICAL
0129242933	10JE66 B	510.6C57,07V24 CIRCOLO MATEMATICO PA
0163286938	8JE66 BP	510.6G827A,49V1-3 GRENOBLE UNIVERSIT
0129242933	9JE67	510.6I61P,28N3,NS INTERNATIONAL CONG
0163286938	10JE66 B	510.6I61P,N INTERNATIONAL CONGRESS O
0163286938	9JE67	510.6I61P,NS,50V2N6 INTERNATIONAL C
0097246803	9JE67 P	510.6L84J,62V37 LONDON MATHEMATICA
0515304091	50 66 BP	510.6L84P,58S3V8 LONDON MATHEMATICA
0515304091	10JE66 BR	510.6L84P,59S3V9 LONDON MATHEMATICA
0484462025	9JE67	510.6L84P,61S3V11 LONDON MATHEMATICA
0097246803	9JE67 P	510.6L84P,63S3V13 LONDON MATHEMATICA
2208349691	280 66 P	510.6L84P,S2V11 LONDON MATH SOC
0217423305	9JE67	510.6L84P,S2V6 LONDON MATHEMATICAL S
0163286938	8JE66 BP	510.6P23,47V64 PARIS ECOLE NORMALE S
0160046938	9JE67 P	510.6S67,53V81 SOCIETE MATHEMATIQUE
4000002285	9N 66	510.7N2769R NTL COMM ON MATH REQUIRE
4000002285	14N 66	510.7N277Y,36N11 NTL COUNCIL OF TEA
0282328862	9JE67	510.7P781P,C2 POLYA G
2195367750	15N 66	510.76D997ME,P3 DYNKIN E B
0282328862	9JE67	510.76P781M,V1 POLYA G
1186408074	11N 66	510.78A244,V5 ADVANCES IN COMPUTERS
1186408074	11N 66	510.78A244,V6 ADVANCES IN COMPUTERS
1186408074	27S 66 B	510.78A664B ARBIB M A
0129242933	10JE66 B	510.78A849,59V6 ASSOCIATION FOR CO
1192306329	18O 66 P	510.78A849,61V8R ASSOC FOR COMPUTIN
0194168043	26O 66 P	510.78A849,65V12 ASSOCIATION FOR CO
1104343934	18O 66 P	510.78C738,63V12 COMPUTERS AND AUTO
RESERVE	20O 66	510.78G493I,R GINSBURG S
1126309434	17N 66	510.78G798O GREENBERGER M
1186408074	10N 66	510.78I612P,65V1N3 INTERNATIONAL C
1186408074	4N 66	510.78I613A INTERNATIONAL SPRING SCH
1104343934	17N 66	510.78J74F,63V23 JOINT COMPUTER CON
1104343934	18O 66 P	510.78J74P,65V27 JOINT COMPUTER CON
1104343934	8N 66	510.78M32PC,65 MASS INST OF TECHNOL
1104343934	8N 66	510.78M382C MASS INST OF TECH COMPUT
ILL	28O 66	510.78M414P,64N2 MASSACHUSETTS INST
2222324471	11N 66	510.78R517A RICHARDS R K
0201120501	9JE67	510.78S989S SYMP ON COMPUTER AUGMENT
0322361742	9JE67	510.78T722C TOU J T
3000000577	14N 66	510.78V497C,C2 VON NEUMANN J
1186408074	8O 66 B	510.78W251C WANTMAN M E
0507328752	9JE67	510.7805A849C,60V3 ASSOC FOR COMPU
1104343934	6O 66 BP	510.7805C7384,62V5 COMPUTER JOURNA
1104343934	18O 66 P	510.78050232,64V10 DATAMATION
0446307553	9JE67	510.7805I43,59V2 INFORMATION + CONT
RESERVE	19O 66	510.7805I43,60V3 INFORMATION + CONT
RESERVE	19O 66	510.7805I43,61V4 INFORMATION + CONT
RESERVE	19C 66	510.7805I43,63V6 INFORMATION AND CO
RESERVE	19C 66 P	510.7805I43,64V7 INFORMATION AND CO
0206109882	9JE67	510.78063A849F,65N20 ASSOCIATION FOR
0107424574	31O 66	510.783B473U BERKEY R
0437502455	9JE67	510.7834M136N,R MCCORMICK J M
1192364062	10N 66	510.7834M136G MCCRACKEN D D
[illegible]	[illegible]	[illegible] M I T COMPUTATION CEN

I.D. NO.	DUE-DAT
0182304660	9JE67
0217423305	9JE67
0217423305	9JE67
4000000520	17N 66
0195267688	9JE67
0190053564	9JE67
1198340354	7N 66
1160163802	2N 66
4000000520	17N 66
1202322315	20O 66
1202322315	1N 66
0129242933	9JE67
0401448970	9JE67
0182304660	9JE67
0163286938	9JE67
MENDING	30S 66
0163286938	9JE67
1163329325	15N 66
1188342108	1N 66
4000002200	8N 66
1063363577	19N 66
0143240049	9JE67
1063363577	19N 66
1063363577	19N 66
0119201394	9JE67
0532408301	9JE67
1186408074	25O 66
0532408301	9JE67
0154289299	9JE67
1126309434	17N 66
1156323583	29S 66
2202366386	19N 66
4000000626	9JL66
1104343934	11N 66
0119201394	9JE67
0217423305	9JE67
2202366386	19N 66
1186408074	25O 66
0217423305	9JE67
0217423305	9JE67
2156387542	21MY66
0119201394	9JE67
2202366386	8N 66
2202366386	8N 66
0119201394	9JE67
4000000036	29O 66
0119201394	9JE67
4000002200	18N 66
2172369517	25O 66
0217423305	9JE67
1156323583	12N 66
1156323583	12N 66
1156323583	12N 66
1156323583	12N 66
[illegible]3360724	17N 66

Appendix 1-1

	I.D. NO.	DUE-DATE		CALL NUMBER	
MATI	0182304660	9JE67		510.8B862M,V2	BRIT ASSOC FOR THE AD
ICAL	0217423305	9JE67		510.8C385C,V1	CAYLEY A
O PA	0217423305	9JE67		510.8C385C,V2	CAYLEY A
RSIT	4000000520	17N 66		510.8H313S	HARRIS C O
CONG	0195267688	9JE67		510.8L528F,56R	LEHMER D N
SS O	0190053564	9JE67		510.8M42T601	MATHEMATICAL TABLES P
AL C	1198340354	7N 66		510.8M42T6	MATHEMATICAL TABLES PROJ
TICA	1160163802	2N 66		510.8P482SE	PETERS J
TICA	4000000520	17N 66		510.8S921S	STROHM R T
TICA	1202322315	200 66		510.8S955L,60V2	SEGAL I E
TICA	1202322315	1N 66		510.8S955L,V1	KAC M
TICA	0129242933	9JE67		510.8S955L,V3	BERS L
OC	0401448970	9JE67		510.8U582P,N1	U S ARMY MATHEMATICS
CAL S	0182304660	9JE67		510.8U582P,N3	KOPAL Z
LE S	0163286938	9JE67		510.8V947,V3	VON NEUMANN J
QUE	MENDING	30S 66		510.9L32,C1	LARRETT D
QUIRE	0163286938	9JE67		510.9S251ST	SARTON G
TEA	1163329325	15N 66		511.2076M342TE	MARKOV A A
	1188342108	1N 66		511.8C748Q	CONFERENCE ON THE HISTOR
	4000002200	8N 66		512.K29I	KELLEY J L
	1063363577	19N 66		512.R813P	ROSENBLOOM P C
UTERS	0143240049	9JE67		512.5R996C	RYSER H J
UTERS	1063363577	19N 66		512.8B262I	BARNES W E
	1063363577	19N 66		512.8B348U	BAUMSLAG G
OR CO	0119201394	9JE67		512.8H656	HILTON P J
PUTIN	0532408301	9JE67		512.8J54F	JENNINGS W
OR CO	1186408074	250 66		512.8K61T	KISS S A
AUTO	0532408301	9JE67		512.8K83N	KOPAL Z
	0154289299	9JE67		512.8L698A	LICHNEROWICZ A
	1126309434	17N 66		512.8M149I	MACDUFFEE C C
NAL C	1156323583	29S 66	B	512.8M916EE,R	MOSTOWSKI A
G SCH	2202366386	19N 66		512.8N873I	NORTHCOTT D G
R CON	4000000626	9JL66	B	512.8P451T,C1	PERLIS S
R CON	1104343934	11N 66		512.8P451T,C2	PERLIS S
HNOL	0119201394	9JE67		512.8S415I	SCHWERDTFEGER H
OMPUT	0217423305	9JE67		512.8W37,V1	WEBER H M
INST	2202366386	19N 66		512.81C678S	COHN H
	1186408074	250 66		512.81D263C	DAVIS M
GMENT	0217423305	9JE67		512.81G274UE	GAUSS K F
	0217423305	9JE67		512.81H269I,54	HARDY G H
	2156387542	21MY66	B	512.81N734I	NIVEN I
	0119201394	9JE67		512.815G482R	GILLMAN L
COMPU	2202366386	8N 66		512.815J35R	JANS J P
OURNA	2202366386	8N 66		512.815L256A	LANG S
	0119201394	9JE67		512.815N15/NE	NAIMARK M A
CONT	4000000036	290 66		512.817H194N,C2	HALMOS P R
CONT	0119201394	9JE67		512.817M681T	MITCHELL B
CONT	4000002200	18N 66		512.817S875SE	STOLL R R
ND CO	2172369517	250 66		512.83C549TE	CHOQUET G
ND CO	0217423305	9JE67		512.83K88E2	KOLALEWSKI G
N FOR	1156323583	12N 66		512.83M953TR	MUIR T
	1156323583	12N 66		512.83M953T,V1-2	MUIR T
	1156323583	12N 66		512.83M953T,V3-4	MUIR T
	1156323583	12N 66		512.83W443S	WELD L G
N GEN	3360724	19N 66		512.[illegible]12V	HAY G E

Appendix 2

Notices to Borrowers

a. Overdue Notice

On the first morning that a book is overdue, this notice is automatically generated by the computer in an addressed and sealed mailer.

b. Recall Notice

This notice is sent whenever a volume is requested by another borrower or for class reserve. A new due date is automatically assigned for seven days after the date of recall.

c. Messages

On the back of all notices to borrowers appear a detailed clarification of the various brief messages printed by the computer on the front and also a schedule of library fines and service charges.

d. UARCO Data Mailer Addressed by Computer.

LEHIGH UNIVERSITY
BETHLEHEM, PA. 18015

THE BURSAR'S OFFICE

NOVEMBER 10, 1966

THE FOLLOWING BOOKS ARE OVERDUE. PLEASE RETURN THEM TO THE LIBRARY.
SEE PARAGRAPH A OVERLEAF.

CALL NUMBER OF BOOK	AUTHOR	DATE DUE	NEW DATE DUE	DATE RETURNED	SERVICE CHARGE	FINE
427.9M333A	MARCKWARDT A H	9 N66				
428.4F912L	FRIES C C	9 N66				
425.S897M	STRANG B M H	9 N66				
422.H413L	HAYAKAWA S I	9 N66				
422.M875S	MORRIS C W	9 N66				
425.2F912S	FRIES C C	9 N66				
				PAY THIS AMOUNT →		

BOOK FINES WILL NOT ACCRUE UNTIL FURTHER NOTICE.

PLEASE PAY ALL FINES & SERVICE CHARGES TO THE BURSAR'S OFFICE

PLEASE RETURN ALL BOOKS TO THE LIBRARY

TO

BARBARA A BASHORE
701 E. UNION BLVD
BETHLEHEM PA 18018

Appendix 2-1

LEHIGH UNIVERSITY
BETHLEHEM, PA. 18015

THE BURSAR'S OFFICE

NOVEMBER 5, 1966

THE FOLLOWING BOOKS ARE RECALLED. A NEW DUE DATE HAS BEEN ASSIGNED.
SEE PARAGRAPH F OVERLEAF. [PLEASE RETURN THIS NOTICE WITH THE BOOK.]

CALL NUMBER OF BOOK	AUTHOR	DATE DUE	NEW DATE DUE	DATE RETURNED	SERVICE CHARGE	FINE
530.1P32BI	PAULING L	16 N66	12 N66			

Statement applicable where letter corresponds to notice on front:

A. Overdue. This is a reminder. Fines of $.25 per day on a book, $1.00 per day on a recalled book, $1.00 per day on a periodical begin to accrue on the day following the Date Due.

B. The material cited was returned after the Date Due. There are fines of $.25 per day on each overdue book and $1.00 per day on each overdue periodical. The Date Due, the Date of Return, and the fine are indicated on the face of this form.

C. The material cited was recalled but not returned until after the New Date Due. Fine has been computed on the basis of $.25 per day for any overdue time after the original Date Due and prior to the New Date Due; and on the basis of $1.00 after the New Date Due. A service charge has been added if the material was returned 14 or more days after the original Date Due.

D. The material cited has not been returned. A service charge of $5.00 for each item cited has been added to the accumulated fine. If the volume is not returned, a replacement charge and an additional charge of $5.00 to cover the cost of cataloging will also be assessed for each item cited. Please notify the University Library if the material has been lost.

E. If replacement costs and cataloging charges have been assessed, and the material has been subsequently returned, these charges will be cancelled, or if already paid, refunded.

F. It is the policy of the Library to recall any material requested for Class Reserve or by another borrower. This material is assigned a New Date Due and a fine of $1.00 per day becomes effective after that date. The New Date Due is set at seven days after the request is received by the Library. It does not void any fines which might accrue by reason of the material's being retained longer than the original loan period.

LIBRARY FINES AND SERVICE CHARGES ARE PAYABLE AT THE BURSAR'S OFFICE. NO MONEY WILL BE ACCEPTED AT THE LIBRARY. HOWEVER, BOOKS ARE TO BE RETURNED TO THE LIBRARY.

UNPAID LIBRARY FINES AND SERVICE CHARGES MAY RESULT IN REFUSAL OF THE UNIVERSITY TO REGISTER A RETURNING STUDENT AS EITHER AN UNDERGRADUATE OR A GRADUATE STUDENT, OR THE WITHHOLDING OF A DIPLOMA, AS IS DONE IN ALL OTHER CASES OF STUDENT INDEBTEDNESS.

Schedule of charges: $ .25 per day on overdue book
1.00 per day on overdue recalled book
1.00 per day on overdue periodical

5.00 service charge on book after 14 days overdue
5.00 service charge on periodical and recalled book after 7 days overdue
5.00 service charge on replaced book to cover cost of cataloging

LEHIGH UNIVERSITY
THE BURSAR'S OFFICE
BETHLEHEM, PA. 18015

BETHLEHEM PA.

FIRST CLASS MAIL
U. S. POSTAGE
PAID 5¢
PERMIT NO. 489

PATENT NO 3 104 799 OTHER PATENTS PENDING DATA-MAILER (TM)

TO OPEN TEAR ALONG THIS PERFORATION
↓ USE THUMB NOTCH TO REMOVE CONTENTS ↓

TO

ISAAC H. AKKAMAD
17 H MORTON STREEI
BETHLEHEM PA
18015

FIRST CLASS MAIL

DO NOT FOLD

Appendix 2-4

Appendix 3

Special Daily Printouts for Alerting Staff

The error list which appears at the beginning of the printout, is coded to indicate both type of error and location of error in deck of transaction cards.

At the end of the printout there are various listings:

1. Bad Charge -- No Discharge. - Volumes which were already charged and not discharged. If the second charge is to the same borrower, the volume retains its original date due. If the second charge is to a new borrower, the volume is charged to the new borrower, and the original charge is indicated in this list.

2. Bad Discharge. - A list of volumes discharged for which there were no charges on the computer tape. This could include (1) volumes charged out by hand after keypunched cards had been inserted during the initial stage of keypunching the core collection and discharged by the keypunched card after mechanization of the system; (2) volumes for which original keypunched cards were lost and the substitute mispunched; (3) a switch of book cards in volumes in the process of inserting cards after charging; or (4) volumes taken from the library without charging.

3. Recall Returned. - This list is used each morning to search the sorting room, and occasionally the stacks, for any recalled volumes missed at the Circulation Desk because the borrower returned them without the recall notice, or without giving any indication that they were recalled volumes.

4. All Recalls. - A cumulative list of recalled books which have not been returned. It is ordered by borrower number and used for pursuing the matter further.

5. User Has Book Outstanding. - An inventory of all books charged to borrowers. Programs have been written to provide a complete list of the circulation file in this order at end of semesters, and also to provide individual listing of holdings of particular borrowers in conjunction with the daily run, as necessary. In the latter case the I.D. cards of those borrowers are inserted in the Data 357, and the produced keypunched card placed with the daily deck.

```
030 5019 UNIVERSITY LIBRARY RUN
OCT 25 66        13 25.6
ODD 0000010000A0A001274
ODD 0000010000A0A001274
ODD 00000 000A0A001745
ODD 00000 000A0A001800
ODD 0000010000A0A001800
NOT 008444 3299420000G54P,V2
NOT 008452 3010000000L766P
NOT 008470 3284200000G6658
ODD 0000010000F#####B000000
ODD 0000010000G#####B000000

THERE WERE 198 NEW BOOK CARDS.

TM* 0378 9  2000000M355E
BID 0616 8  09000000S367C
BID 0617 8209000000H339
BID 0618 8090000000L673A
BID 0619 8040000000E78

THERE WERE 000255 NEW BOOK CARDS AND 000690 TRANSACTIONS.

004 NON-BLANK CARDS WERE IGNORED.
```

```
00000700*THIS IS DUMMY
00000800*THIS IS DUMMY
00001200*THIS IS DUMMY
00001300*THIS IS DUMMY
00001400*THIS IS DUMMY
        JENNINGS W I   00*PARTY POLITIC
        LIPPMANN W  00*PUBLIC OPINION
        GORDON S 00*BRITISH PARLIAMENT
00012800*THIS IS INSURANCE OF TRANSACT
00012900*THIS IS INSURANCE OF TRANSACT

00*ARSHALL D   00*ENGLISH PEOPLE
SCHOFIELD W H  00*CHIVALRY IN ENG
DODD W G 00*COURTLY LOVE IN CHAUC
LEWIS C S   00*ALLEGORY OF LOVE
00*ESSAYS IN MEMORY OF BARRETT WI
```

BAD CHARGE --- NO DISCHARGE OCT 25 66

T-DATE	DUE-DATE	NEW-DATE	I.D. #	
661008	670609		0195269456	8185000000W553ZH
660929	670609	661018	0347266780	3200000000Y17,N8
660916	661014		2152349909	6285000000M272A
661013	661110	661022	3207100951	8185000000M623S

BAD DISCHARGE OCT 25 66

T-DATE	DUE-DATE	NEW-DATE	I.D. #	
661025	661101		9000000000	6605000000A587E,65V4
661025	661101		9000000000	6591000000B724I

```
HIS IS DUMMY                                    00*00 00 00 0009000000000000
HIS IS DUMMY                                    00*00 00 00 0002287400004301
HIS IS DUMMY                                    00*00 00 00 0002173407526O1
HIS IS DUMMY                                    00*00 00 00 0009000300000001
HIS IS DUMMY                                    00*00 00 00 0002170019355O1
HIS IS DUMMY                                                000
NNINGS W I    00*PARTY POLITICS                             000
PPMANN W  00*PUBLIC OPINION                                 000
RDON S 00*BRITISH PARLIAMENT                                0003162381631OO
THIS IS INSURANCE OF TRANSACTION
THIS IS INSURANCE OF TRANSACTION                00*00 00 00 00 0009000000000000

RSHALL D    00*ENGLISH PEOPLE IN EIGHTEENTH CENTURY    0002189360067O1
FIELD W H  00*CHIVALRY IN ENGLISH LITERATURE CHA  00*    128UUU8U6U00
 W G 00*COURTLY LOVE IN CHAUCER AND GOWER         00*    128UUU8U6U00
S C S    00*ALLEGORY OF LOVE                              000128UUU8U6U00
SSAYS IN MEMORY OF BARRETT WENDELL BY HIS ASSISTANT      000128UUU8U6U00

SACTIONS.
```

```
8185000000W553ZH        000382HOWE I    00*EDITH WHARTO

3200000000Y17,N8        000229HAMBURGER J 00*JAMES HIL

6285000000M272A         000255MAGILL P L  00*AIR POLLU

8185000000M623S         000366MICHENER J A    00*SOURCE


6605000000A587E,65V4    000866ANGEWANDTE CHEMIE 00*INT

6591000000B724I         000279BOONE J  00*INDUSTRIAL A

5170000000N40S          000[illegible]  00*[illegible]
```

RECALL RETURNED OCT 25 66

T-DATE	DUE-DATE	NEW-DATE	I.D. #	
660308	660[illegible]0	661028	0050266555	6280600000A512J,65V57
661004	661101	661029	2066384971	9420550000H434A

ALL RECALLS OCT 25 66

T-DATE	DUE-DATE	NEW-DATE	I.D. #	
660928	661005	661019	0082308267	6580500000H33BR,58V36
660624	670609	660726	0107207003	1321000000M996F
660702	660709	660811	0129242933	5105000000081,50V2-3
660524	670609	661026	0139260586	5405300000Z48,14V87

USER HAS BOOK OUTSTANDING OCT 26 66

T-DATE	DUE-DATE	NEW-DATE	I.D. #	
660729	670609		0000002088	3730000000B854S,C1
660728	670609		0000002088	3709730000W464P
660907	670609		0000002146	8680000000C419DE,49
660923	670609		0000002232	3300000000B838T
660921	670609		0000002232	3301097300I59
660921	670609		0000002232	3301820000H496M
660920	670609		0000002232	3304000000E47S,V2
660920	670609		0000002232	3385200000S419W
660917	670609		0000002232	3301800000B348B
660920	670609		0000002232	3301800000B365E
660921	67 [illegible]09		0000002267	3360000000M987T
[illegible]	[illegible]		[illegible]	[illegible]

L2J,65V57	000093AM WATER WKS ASSOC00*JOU
34A	000519HATTINGLY G 00*ARMADA
33BR,58V36	00020200*HARVARD BUSINESS REVI
996F	000549MYERS J K 00*FAMILY AN
81,50V2-3	00011800*OSAKA MATHEMATICAL JO
48,14V87	00003300*ZEITSCHRIFT FUR PHYSI
8854S,C1	0000198RIGGS T H 00*SECONDARY
1464P	000275WELTER R 00*POPULAR EDUC
C419DE,49	000276CERVANTES S 00*DON QUIXO
8838T	000304BRENNAN M J 00*THEORY OF
159	000307INSTITUTIONAL ECONOMICS
H496M	000308HENDERSON J M 00*MICROE
E47S,V2	000564ELLIS 00*SURVEY OF CONTE
S419W	000043SCITOVSKY T 00*WELFARE A
B348B	000364BAUMOL W J 00*BUSINESS
B365E	000565REACH E F 00*ECONOMIC
M987T	000238MUSGRAVE R A 00*THEORY

Appendix 4

Daily Circulation Statistics

(Sample Sheet for October 24, 1966)

Statistics are given for total charges and discharges of the classified stack volumes; for total charges to, and discharges from, the reserve shelves, interlibrary loan, bindery, mending room, missing list; and for the number of recalled books and recalled books returned. The charges of the stack volumes are broken down by:

(1) type of borrower: faculty, full-time graduate students, part-time graduate students, undergraduates, staff, students from other colleges, high school students, and other outside borrowers;

(2) classification of volume: the ten general Dewey Decimal classes and a PZ class used on the Education Department's Juvenille collection by the Library for purpose of experimentation with the Library of Congress classification.

All of these figures are given for the previous day, cumulative for the month, and cumulative for the academic year. There is also a record of the total number of books in circulation each day. Headings for collections not yet incorporated in the mechanized system are printed by the computer and the circulation figures added by hand.

DAILY STATISTICS FOR OCT 24 666

IF TYPES	FAC	GRAD	UG	STAFF	O GRAD	O COLL	H.S.	CTHE
FOR TODAY	000018	000026	000114	000006	000077	000037	000026	0000
FOR MONTH	000706	001043	001964	000170	001027	000430	000185	0003
FOR YEAR	003697	003303	004166	000698	004966	001182	000434	0011

CLASS COUNT	ZERO	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVE
FOR TODAY	000007	000022	000003	000094	000001	000045	000037	0000
FOR MONTH	000127	000484	000106	001259	000097	001113	000559	0002
FOR YEAR	000535	001304	000335	004602	000435	003986	001881	0006

	TOTAL CHARGES	TOTAL DISCHARGES	TOTAL RECALLS	RECALL RETURN
FOR TODAY	000327	000272		000004
FOR MONTH	005936 OK	003886	000105	000070
FOR YEAR	019775	016240	000360	000249

TOTAL BOOKS IN CIRCULATION 009917

	RESERVE CHARGE	RESERVE DISCHARGE	BINDERY CHARGE	BINDERY DISCHARGE	MISSING CHARGE	MISSING DISCHARGE
FOR TODAY						
FOR MONTH	000318	000048	000003	000009		
FOR YEAR	001822	000243	000037	000019		

	UNBD. PER,	GOVT. DOCS,	MIRCOTEXTS	RESERVE	RARE BOOKS	LEHIGH
FOR TODAY	— 15	0	12	122		
FOR MONTH	— 525	4	447	3,378		
FOR YEAR	2695 =	17	1775	8986		

GRAD	O COLL	H.S.	CTHER	I L L
0077	000037	000026	000023	
1027	000430	000185	000360	000051
4966	001182	000434	001157	000346

OUR	FIVE	SIX	SEVEN	EIGHT	NINE	JUVENILE
00001	000045	000037	000007	000070	000037	000004
00097	001113	000559	000202	001002	000812	000175
00435	003986	001881	000643	002987	002360	000879

OTAL RECALLS	RECALL RETURNS	ILL RETURNS
	000004	
00105	000070	000042
00360	000249	000234

Y CHARGE	MISSING CHARGE	MISSING DISCHARGE	MENDING CHARGE	MENDING DISCHARGE
000009			000069	000004
000019			000286	000019

RESERVE	RARE BOOKS	LEHIGH COLL.	REF.	MAPS	TOTAL
122					
3,378					
8986					